

QUESTIONNAIRE DESIGN

by

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ABSTRACT

An overview of the survey process is presented with special emphasis on questionnaire design. Topics covered are types of questions, structure of questions, question wording, and questionnaire construction. This information should help persons in state and local agencies to collect better data through more effective questionnaire design and implementation.

The collection, processing, and dissemination of information have become increasingly important to the health care provider, researcher, and administrator faced with competing alternatives for the expenditure of scarce resources. Sample survey design, once relegated by many students to the dusty shelf of pedagogic esoterica, has become a useful tool to a more diverse group of data users employing more sophisticated computer technologies. The intent of this *Statistical Primer* is to provide this newly emerging audience of data users with an overview of the "survey process" placing special emphasis upon questionnaire design.

Conducting A Survey

A survey is a systematic means of collecting information directly from people (respondents) often through the use of a questionnaire. A census is a special type of survey in which efforts are made to gather information from all members of the population. In contrast, a sample survey normally involves the selection of a small percentage of eligible members of a population representative of the larger group. If appropriate steps have been taken to eliminate bias in the selection of sample respondents, the sample size and variability of the sampling units can be used to determine the precision of estimated means, proportions, and other population indices being measured in the survey.

There are three basic types of surveys: face-to-face, telephone, and mail. The choice of method is dependent upon, among many other things, the research goal of the survey, the population chosen for study, and the survey budget.

Warwick and Lininger (1) have delineated seven interdependent stages in conducting a sample survey, most of which also apply in the case of a census of all eligible respondents. The following is an overview of these stages.

Planning is the preliminary stage of the survey. During the planning stage researchers should conduct an extensive literature review of previous publications to be used as a basis for questionnaire design. The formulation of a "research question" as a focus for the project is often helpful in ensuring continuity between the stages of the survey which culminate in data analysis and report writing.

Sampling is the process of selecting a subset of eligible respondents from a population. The key to the cost-effectiveness of choosing a small number of respondents and generalizing to a much larger whole is the representativeness of the sample. Consultation with a survey statistician, while beneficial to all stages of survey design, is most crucial in the sampling stage. The foundation of a good sample survey rests upon the sample (1).

Questionnaire design is the stage of the survey process in which the goal of the project, often embodied in the research question, is translated into a series of questions. The principles of designing a survey questionnaire are the same whether the scope of a survey project is limited to an interoffice canvas or whether it is a multisite national survey. A discussion of these principles is presented in most of the remainder of this report.